

IN THE CLAIMS:

Please cancel claims 5 and 10 without prejudice to or disclaimer of the subject matter recited therein.

Please amend claims 1, 9, 12, and 26 as follows.

1. (Currently Amended) An image processing apparatus for processing a photographed image of ~~an object~~ a body including a neck region, said apparatus comprising:

an object extracting portion configured to extract ~~an object region which is a region of the object~~ a body region from the photographed image;

a region extracting portion configured to extract a region including a cervical spine as a predetermined region on a line segment connecting a pixel showing a maximum value on a contour on one side of the body region and a pixel showing a maximum value on a contour on the other side of the body region;

an analyzing portion configured to ~~determine a region from which a statistics value is calculated on a basis of both a pixel which is on a contour on a side in the object region and shows a maximum value and a pixel which is on a contour on the other side in the object region and shows a maximum value~~ calculate a statistics value from the predetermined region; and

a gradation conversion portion configured to execute a gradation conversion processing on the photographed image based on the statistics value,

wherein the region extracting portion extracts a region including a point showing a minimum value on the line segment as the predetermined region.

2. (Cancelled)

3. (Previously Presented) An image processing apparatus according to claim 1, wherein said object extracting portion extracts the object based on a through region and a region adjoining the through region in a predetermined width.

4. (Previously Presented) An image processing apparatus according to claim 1, wherein the photographed image is an image obtained by radiographing of the object.

5-8. (Cancelled)

9. (Currently Amended) An image processing apparatus according to claim 1, wherein ~~said analyzing portion determines the region from which the statistics value is extracted on a basis of a pixel value on a contour in the object region which has been smoothed~~ the image of the body including the neck region is a smoothed image.

10. (Cancelled)

11. (Previously Presented) An image processing system in which a plurality of apparatuses are connected with each other in a state capable of communicating with each other, wherein the system has each function of the image processing apparatus according to claim 1.

12. (Currently Amended) An image processing method for processing a photographed image of ~~an object~~ a body including a neck region, said method comprising the steps of:

~~extracting an object region which is a region of the object~~ a body region
from the photographed image;

extracting a region including a cervical spine as a predetermined region on a line segment connecting a pixel showing a maximum value on a contour on one side of the body region and a pixel showing a maximum value on a contour on the other side of the body region;

~~determining a region from which a statistics value is calculated on a basis of both a pixel which is on a contour on a side in the object region and shows a maximum value and a pixel which is on a contour on the other side in the object region and shows a maximum value~~ calculating a statistics value from the predetermined region; and

executing a gradation conversion processing on the photographed image based on the statistics value,

wherein the step of extracting the region including the cervical spine region as the predetermined region extracts a region including a point showing a minimum value on the line segment as the predetermined region.

13-21. (Cancelled)

22. (Previously Presented) A computer-readable storage medium, said medium storing a program configured to make a computer realize functions of the image processing apparatus according to claim 1.

23. (Previously Presented) A computer-readable storage medium, said medium storing a program configured to make a computer realize functions of the image processing system according to claim 11.

24. (Previously Presented) A computer-readable storage medium, said medium storing a program configured to make a computer execute steps of the image processing method according to claim 12.

25. (Previously presented) An image processing apparatus according to claim 1, wherein the statistics value is an average value.

26. (Currently Amended) An image processing apparatus according to claim 1, wherein the ~~object~~ neck region includes ~~[[a]]~~ the cervical spine region.